

614
H2L

LABORATORY BULLETIN

DEPARTMENT OF HEALTH & ENVIRONMENTAL SCIENCES, HELENA, MONTANA

MAR 25 1976
STATE DOCUMENT

No. 60 Editor : David B. Lackman, Ph.D., Administrator, Laboratory Division
March 24, 1976

RESTRICTION OF SERVICES IN THE "COMMUNICABLE DISEASE" SECTION OF THE LABORATORY
(Continued from Bulletin No. 59, July 30, 1975)

3. Virology : As the State Laboratories Building was being constructed in 1954, Dr. Thompson, State Health Officer, conceived the idea for a regional virus laboratory. Federal funding was approved to equip and construct a facility on the southwest end of the Cogswell Building. Planning commenced and the virologist, his assistant, and a laboratory helper moved in during fiscal year 1959. Operation was financed by Federal grants to assess the level of immunity to poliomyelitis following vaccination with Salk vaccine; and later with the Sabin "live" vaccine. There were also grants for work with "Asian" influenza which invaded Montana the end of August, 1957; reaching a peak during October. When I came from Hamilton in October, 1966, this facility was closed because Federal grants had expired. With the help of Miss Kuhns and the cooperation of Dr. Anderson, the budget of the microbiology laboratory division was expanded to include the virus laboratory; and we were in business again.

The service we have restricted is surveillance of the waning level of immunity to poliomyelitis by means of the tissue-culture neutralization test (see *BIG SKY LAB BENCH*, 1975, page 12). We had reinstituted this program by testing sera of persons through 21 years of age from the syphilis serology laboratory. Advice from our epidemiologists suggests that neutralization tests for poliomyelitis antibodies do not reflect immunity any more accurately than questionnaires for history of immunization. Surveys of school children are already being done, and in addition to giving data on community levels, allow us to identify individuals who can be immunized.

Perhaps we have reached another milestone where a dreaded disease has been conquered by vaccination. In the five years before introduction of vaccine for poliomyelitis in 1955, there were an average of 21,000 cases per year; compared to a mere seven in 1974. Truly a remarkable record! However, promotion of poliovaccine must continue because statistics showing increases in the number of persons who have not been immunized concern us very much. The State Board of Health was created on March 15, 1901, when Governor Joseph K. Toole signed House Bill No. 104. The Board's first mission was to combat the serious and prevalent diseases of the era : Rocky Mountain spotted fever (especially in the Bitter Root Valley), smallpox, diphtheria, tuberculosis, and typhoid fever. Rocky Mountain spotted fever has been partly controlled by an increasing awareness on the part of the public of dangers inherent in exposure to ticks. Antibiotics have largely solved the problem of treatment. Although vaccine has been deficient in specific antigenic material, there is evidence that persons vaccinated before infection have experienced a less severe course of the disease. Smallpox has been eradicated by vaccination. In the instance of diphtheria, childhood vaccination has been very important in decreasing the incidence of disease. Tuberculosis isn't the problem it was in 1901 because of improvement in living conditions, education, chemotherapy and chemoprophylaxis. Typhoid fever has succumbed to the efforts of sanitary scientists.

Because polio neutralizations are no longer done on a routine basis, our order for primary monkey kidney cells has been reduced from weekly to monthly. Vero and Hep-2 cells are transferred twice a week so cultures are ready for inoculation

Montana State Library



3 0864 1006 5474 1

(over)

when a specimen arrives. Therefore, a report should be forthcoming in six days. As monkey kidney cells are available once a month, a second report on results of their inoculation, as well as results of passage in Hep-2 and Vero, will follow. For the past year we have missed outbreaks of enterovirus infections (aseptic meningitis, epidemic pleurodynia, etc.). Most likely this is due to not having received the right specimens at the right time. Our epidemiologists will work on the problem through communications with physicians. The last enterovirus outbreak from which virus was isolated occurred over a year ago; it was Coxsackie A9. This past season Utah reported quite a number of ECHO 30 isolates along with ECHO 6, ECHO 9, and Coxsackie B2.

INFLUENZA 1976 Add yet another chapter to the history of viral influenza in Montana (see *Lab. Bulletin No. 1, January 1968; updated October 1974; Lab. Bulletin No. 58, May 1975*). This year's epidemic seems to be quite severe compared to others of recent years. Particularly noticeable has been a high incidence of complications which in some cases have resulted in death. Because of this, and because we are faced with the likelihood that the Swine / A strain of influenza virus will again cause epidemics of disease in man, the Center for Disease Control is considering changes in recommendations for vaccination. (Some of the "hardest" evidence that the Swine / A strain was the culprit in the 1918-1919 pandemic was obtained by Dr. Robert Philip and me in studies on serums from Alaskan natives who survived influenza infection in '18-'19 in comparison with others living at the time in an area not breached by the pandemic. (Philip, R.N., and Lackman, D.B. Observations on the present distribution of influenza A/Swine antibodies among Alaskan natives relative to the occurrence of influenza in 1918-1919. *Am.J. Hyg.* 75 : 322-334, May 1962.) This year we have quite a collection of isolates to send to the WHO Influenza Laboratory at CDC. They have tentatively been identified as the current epidemic strain; A2/Victoria/3/75 (H3N2). Many cases have also been confirmed serologically as Group A influenza. Our index case for the '76 season had an onset date of February 10; the specimen came from Havre. In the mild epidemic of 1975, our index cases had an onset date of January 15. Although cases are still occurring, the epidemic probably reached its peak, judging from the number of specimens submitted, sometime between February 23 and March 3. (From a fatal case of pneumonia early in the epidemic, we isolated an Adenovirus.)

All isolates in '75 were A2/Port Chalmers/1/7 (H3N2). So far we don't have any indication that the Swine/A strain has infected man in Montana.

VIRUSES ASSOCIATED WITH ACUTE RESPIRATORY ILLNESS IN MAN

Adenovirus group - especially Types 1,2,3,4,5, and 7

Picornavirus group

ECHO viruses - 30 types

Coxsackieviruses - Group A, 24 types - Group B, 6 types

Rhinoviruses - 105 types

Myxoviruses - Influenza viruses, Groups A, B, and C

Paramyxoviruses

Parainfluenza viruses 1, 2, 3

Respiratory syncytial virus

Herpesvirus group

Herpes simplex virus

Epstein-Barr virus (Infectious mononucleosis)

Coronavirus group - strains found in man usually produce respiratory symptoms; isolates not further designated - prototype strains for the group are avian infectious bronchitis and murine hepatitis viruses.

Another service in virology which has been questioned is the Ox-cell hemolysin test for Infectious Mononucleosis. Although several kit-tests are available for use in the clinical laboratory, there are occasions when the physician would like a back-up, reference test such as Ox-cell Hemolysin. Therefore, we will continue to provide this service. (Helena has experienced an infectious mono death!)

AMENDEMENT OF BIG SKY LAB BENCH, 1975 Edition

The functional diagram for the Division on page 1 of this report accurately reflects activity in the laboratory. Reorganization of State Government in Montana very wisely stopped at the Bureau level. However, difficulty is encountered when one attempts to organize components below the bureau level using such terms as section and unit. The component of the microbiology laboratory responsible for VD serology functions as an independent entity under the supervision of the Bureau Chief. This isn't the impression conveyed on page 7 of the report. Anne Sallgren is responsible for VD serology and has announced the following schedule for syphilis serology proficiency testing for 1976.

Mailing date from State Laboratory / Results must be returned to State Laboratory by :

March 1, 1976

June 7

September 7

November 22

March 15, 1976

June 21

September 21

December 6

Presently there are 71 laboratories approved to perform syphilis serology under the provisions of the Codes covering prenatal and premarital serological tests.

NATIONAL PROFICIENCY EXAMINATIONS FOR CYTOTECHNOLOGISTS AND CLINICAL LABORATORY TECHNOLOGISTS

The third session of these examinations will be held in October, 1976. To date we haven't received a consolidated list of those in Montana who passed the Clinical Laboratory Technologist examination given in November. Two out of three candidates passed the Cytotechnologist one. Considering these examinations, we have received the following advice from Fred E. Tosh, M.D., Director, Division of Quality and Standards in Denver: *"Some individuals, particularly clinical laboratorians, desire to take an examination when they already meet (or exceed) the basic qualifications prescribed in the regulations for that given category of personnel. The only purpose of the examination is to serve as a means by which individuals who do not meet the prescribed qualification requirements may demonstrate their competence and thereby qualify under the regulations. They are not intended, nor are they designed to measure or validate the proficiency of individuals who meet the personnel requirements prescribed in regulations. Also, the high costs associated with the administration of these examinations makes it doubly important that the exams be limited to eligible persons only."*

Although you may not be required to take the examination in your present position, it is becoming increasingly apparent that it would be to your advantage to sit for it. Who knows what the future may hold!

**STATE DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES
HELENA, MONTANA 59601
LABORATORY DIVISION**